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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,254	07/03/2001	Jennifer Quirin Trelewicz	IBMN.026US01 (0526)	1933

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EXAMINER
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ART UNIT	PAPER NUMBER
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)	
Advisory Action *Before the Filing of an Appeal Brief*	09/898,254	TRELEWICZ ET AL.	
	Examiner	Art Unit	
	James A. Thompson	2625	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED <u>15 February 2007</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

   a) ☒ The period for reply expires <u>3</u> months from the mailing date of the final rejection.

   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

     Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

<u>NOTICE OF APPEAL</u>

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

<u>AMENDMENTS</u>

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because

   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ They raise the issue of new matter (see NOTE below);

   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

     NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: <u>*1,2,5,7,8,11,13,14,17,18,21 and 23*</u>.

   Claim(s) withdrawn from consideration: _____.

<u>AFFIDAVIT OR OTHER EVIDENCE</u>

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome <u>all</u> rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

<u>REQUEST FOR RECONSIDERATION/OTHER</u>

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: <u>see attached.</u>

12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.

13. ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 15 February 2007 have been fully considered but they are not persuasive.

Regarding page 9, lines 2-4: The proposed amendments have been entered. The proposed amendments do not alter the outstanding rejections.

Regarding page 9, lines 5-18: Claims 17, 18 and 21 do not recite a "computer-readable medium encoded with a computer program" which, as Applicant states, would define structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized. Instead, claims 17, 18 and 21 recite *inter alia* a "program storage medium readable by a computer, the medium tangibly embodying one or more programs of instructions executable by a computer". This recitation does not require software encoded on a computer-readable medium. Claims 17, 18 and 21, as presently recited, could simply be, among other possibilities (1) software *per se* on a disk, (2) high level programming language written onto a computer disk that then needs to be compiled to be executed, (3) a scripting program that is then interpreted by an scripting language interpreter and then executed, or (4) program language written on a sheet of paper, scanned by a computer scanner, compiled and then executed. Thus, claims 17, 18 and 21 still do not comply with the requirements of 35 USC §101.

Regarding page 9, line 19 to end of page 11: In Curry (USPN 5,537,223), the shape of the spot is altered according to a shape changing scaling function (column 27, lines 43-54 of Curry). The spot function is an ellipse (figures 38-41 and column 31, lines 5-20 of Curry), and as such combines two functions. As is abundantly well-known, the general mathematical equation for an ellipse is

$$f(x,y) = \frac{1}{2}\left(\cos(\pi x/p_x) + \alpha\cos(\pi y/p_y)\right)$$ [where x and y are the first and second spot function ordinates, p_x

scales ordinate x, p_y scales ordinate y, and α is a scaling value that determines the ellipticity of the function], which thus combines the two functions of $\cos(\pi x/p_x)$ and $\alpha\cos(\pi y/p_y)$. Further, as admitted by Examiner in the final rejection (mailed 29 November 2006), Curry does not disclose that the shape changing is asymmetric. Allen (USPN 6,535,307 B1) teaches that, by specifically controlling the spot size, shape and ellipticity (column 4, lines 16-23 of Allen), the factor α of the equation which represents the spot function of an elliptical halftone spot (as taught by Curry) would be a function of ordinate position and spot radius, since the radius is directly related to the spot size and the ellipticity is controlled

based on the ordinate values. By controlling the spot size and edge sharpness of the spot function, the amount of spreading of the spot function is controlled. Since the spot is an ellipse, this would also be based on the radius and ordinates of the spot function. Thus, in the given elliptical equation, the factor a can be replaced with a value that is a function of the ordinates (which can also be represented simply by p) and the radius ($S(p,r)$). Thus, the resultant spot function can be expressed as

$$f(x,y) = \frac{1}{2}\left(\cos(\pi x/p_x) + \frac{1}{S(p,r)}\cos(\pi y/p_y) \right)$$ where x and y are the first and second spot function ordinates.

p_x scales ordinate x, p_y scales ordinate y, p is a spot shape parameter for controlling the shape of the spot, $S(p,r)$ is a scaling function, and r is the radius of the spot. Furthermore, by applying said spot function which changes the shape of the spot, the shape changing scaling function is thus asymmetric. Essentially, since the combined teachings of Curry in view of Allen teach the specific spot function equation recited in claim 1 and the ability to manipulate the variables of said function, then the spot function is changed asymmetrically. This is not only clear from the structure of the equation itself, but also if the changing of the equation taught by the combination of Curry and Allen is not asymmetrical, then the changing of the shape of the spot function recited in claim 1 is also not asymmetrical.

Regarding page 12, line 1 to end of page 13: As set forth in the final rejection. Curry discloses that the spot function is elliptical (figures 38-41 and column 31, lines 5-20 of Curry), and as such combines two the functions that make up the mathematical description of an ellipse. The parameterized ellipse function is used to alter the rotation and shape of the dot shape (column 11, lines 54-58 of Curry). Allen teaches scaling a spot function such that the spot function used by the device is described *as per* the equation recited in present claim 1. Applicant has not substantively addressed the portions of Allen cited by Examiner, nor has Applicant addressed the combination of Curry and Allen set forth in the final rejection that shows how said combination renders claim 1 obvious to one of ordinary skill in the art at the time of the invention. Applicant's discussion of Allen in this section of Applicant's arguments are mere personal generalizations of the Allen reference.

Regarding page 14, line 1 to end of page 15: Column 4, lines 16-23 of Allen teach that many of the various spot shape parameters are able to be employed as imaging parameters. These parameters include spot ellipticity, spot size, edge sharpness, and spot shape. *By combination with Curry*, the function recited in claim 1 is taught. The function taught by Curry for the spot shape is

$$f(x,y) = \frac{1}{2}\left(\cos(\pi x/p_x) + \alpha \cos(\pi y/p_y) \right),$$ which is more general than the equation recited in claim 1. As set forth in said final rejection, by controlling the spot size and edge sharpness of the spot function, the

amount of spreading of the spot function is controlled. Since the spot is an ellipse, this would also be based on the radius and ordinates of the spot function. Thus, in the given elliptical equation, the factor a can be replaced with a value that is a function of the ordinates (which can also be represented simply by p) and the radius ($S(p,r)$). Thus, the resultant spot function can be expressed as

$f(x,y) = \frac{1}{2}\left(\cos(\pi x/p_x) + \frac{1}{S(p,r)}\cos(\pi y/p_y) \right)$ where x and y are the first and second spot function ordinates.

p_x scales ordinate x, p_y scales ordinate y, p is a spot shape parameter for controlling the shape of the spot, $S(p,r)$ is a scaling function, and r is the radius of the spot. In other words, the parameter α taught by Curry becomes, by combination with the teachings of Allen, the functional parameter $S(p,r)$ since Allen teaches that the spot size and edge sharpness of the spot function can be controlled.
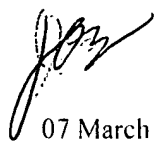
In brief, Curry teaches an elliptical spot function and Allen teaches a further manipulation of the spot function which, when applied to an elliptical function, generates the function recited in claim 1. Examiner *did not* state that Allen alone teaches the spot function recited in claim 1. Rather, the combination of Curry and Allen teaches the spot function recited in claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James A. Thompson
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07 March 2007

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